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 <151> 2005-07-04
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 <211> 20
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 <223> choi4 (PCR Primer)
 <400> 2
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 <400> 3
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 <212> DNA
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 <223> HJ-PHB-C (PCR Primer)
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<223> SCL-1 (PCR Primer)		
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<223> SCL-3 (PCR Primer)		
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<210> 9		
<211> 28		
<212> DNA		
<213> Artificial Sequence		
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<223> BA-C (PCR Primer)		

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cccactagtt cagcgctcga tggccagc 28

<210> 10
<211> 28
<212> DNA
<213> Artificial Sequence

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<223> SD-phbC-N (PCR Primer)

<400> 10
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<210> 11
<211> 39
<212> DNA
<213> Artificial Sequence

<220>
<223> phbC-C (PCR Primer)

<400> 11
cccactagtt cadmscttya crtaacgtcc tggcgcygc 39

<210> 12
<211> 756
<212> DNA
<213> Pseudomonas sp. HJ-2

<220>
<221> variation
<222> (482)
<223> n=A, C, G or T

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ccctactcca gccgcaaggc ttcctggatt gccacgcaac tcgaggcggg ctttcacttc 180
cactgcatcg actgcgacat caccgactgg gatagcacc gccaggcctt cgacatgggtg 240
cacgagactg tcggccccgat cgatgtattg gtcaacaatg ccggcatcac ccgcgacggc 300
actttccgca agatgtcccc ggaaaactgg aaggcggtga tcgataccaa tctcaccggc 360
ctgttcaaca caaccaagca ggtcatcgag ggcatgctgg ccaagggctg gggacgcgtc 420
atcaacatct cctcaatcaa tggccagcga ggccagttcg ggcagaccaa ctactccgcg 480
gncaaggctg gcattcatgg cttcagcatg gccttggccc gcgagggtgag tggcaagggc 540
gtgaccgtca atacggtttc ccctggctac atcaagaccg acatgaccgc ggcgattcgc 600
ccggacatcc tcgaagacat gattactggc attcccgtgg gccgtctcgg ccagccccgag 660

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<220>
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<222> (207)
<223> n=A, C, G or T

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<223> n=A, C, G or T

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gctggcagaa taccgctcgc caggcancng gtcatcgccg gcctgccaca cgccgtaccg 240
gcgatgaccc tgaacaaggt ctgtggctcc ggcctgaaag ccctgcacct gggcgcccag 300
gccatccgct gtggcgatgc cgaggtggtg attgccggtg gcatggagaa catgagcctg 360
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gacagcatga tcgtcgacgg cctgtgggac gccttcaacg actaccacat ggggatcact 480
gccgagaacc tggtagacaa gtacggcatc agccgcgaag cccaggacga attcgccgcc 540
gcctcgcagc agaaagccgt ggccgccatc gagaccggtc gcttccgcga cgagatcgtc 600
ccggtgagca ttccgcagcg caagggcgag gcgctgagct tcgacaccga cgaacagcca 660
cgcgccggca ccaccgccga gtcgctgggc aagctgaaac cggccttcaa gaacgacggc 720
agcgttactg ccggcaacgc ttccagtctc aacgacggcg ccgccgcggt actgctgatg 780
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agcctgctgc atgaaatgct caggcgcgac gcgaaaaaag gcctcgctac cctgtgtatc 1140
ggcggcgggc agggcggtgg gctggccatc gagcgctga 1179

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<210> 14
 <211> 1701
 <212> DNA
 <213> Pseudomonas sp. HJ-2 (SCL-PHA synthase (phaC))

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 caaagccagt gggtcgacgt acctgtcgag gcgttggagc aactgcaggc ggactaccaa 180
 caacagtggg ccgaacttgg ccagcaattg ctgagctgcc agccgttcgc attcagcgat 240
 cgtcgcttcg ccagtggcaa ctggagcgaa ccgctgttcg gttccctggc tgccttctac 300
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 ccccgccagc gcttgcgtta cttgatcgag caagcgattg ccgcaagcgc cccaagtaac 420
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 atattcatgg tcccgccctg gatcaacaag tactacatcc ttgacctcgg gcccgaaaac 720
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 gccctgcgca ctaccggggc catcagtggg gagcgccacc tgaactgttt gggtttctgc 900
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 cagcattccg gcagttgggt ggggtgactgg ttcgcctggt tgaccggcta tgccggccca 1620
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1701

<210> 15
 <211> 3933
 <212> DNA
 <213> Pseudomonas sp. HJ-2 (phb locus)

<400> 15
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 tggttaatgg gtactgcgag caatgcggca cgtatagctc tggtcaccgg tggatatggc 180
 ggtatcggta cggcgatcag ccagcgcctg catcgggatg gcttcaccgt ggtggtgggc 240
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 gacggcactt tccgcaagat gtccccggaa aactggaagg cggtgatcga taccaatctc 480
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ccgctggctc	tgggtctact	gttctggaac	aacgacagca	ccaatctgcc	ggggcccctg	3480
tattgctggt	atctgcgcca	cacctacctg	cagaacgacc	tcaaatcggg	ggagttggat	3540

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gaacatgcgc caggacgtta tgtgaagcta tga 3933

<210> 16
<211> 251
<212> PRT
<213> Pseudomonas sp. HJ-2 (NADPH-dependent acetoacetyl-CoA reductase (phbB))

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Met Gly Gly Ile Gly Thr Ala Ile Ser Gln Arg Leu His Arg Asp Gly
20 25 30
Phe Thr Val Val Val Gly Cys Asn Pro Tyr Ser Ser Arg Lys Ala Ser
35 40 45
Trp Ile Ala Thr Gln Leu Glu Ala Gly Phe His Phe His Cys Ile Asp
50 55 60
Cys Asp Ile Thr Asp Trp Asp Ser Thr Arg Gln Ala Phe Asp Met Val
65 70 75 80
His Glu Thr Val Gly Pro Ile Asp Val Leu Val Asn Asn Ala Gly Ile
85 90 95
Thr Arg Asp Gly Thr Phe Arg Lys Met Ser Pro Glu Asn Trp Lys Ala
100 105 110
Val Ile Asp Thr Asn Leu Thr Gly Leu Phe Asn Thr Thr Lys Gln Val
115 120 125
Ile Glu Gly Met Leu Ala Lys Gly Trp Gly Arg Val Ile Asn Ile Ser
130 135 140
Ser Ile Asn Gly Gln Arg Gly Gln Phe Gly Gln Thr Asn Tyr Ser Ala
145 150 155 160
Xaa Lys Ala Gly Ile His Gly Phe Ser Met Ala Leu Ala Arg Glu Val
165 170 175
Ser Gly Lys Gly Val Thr Val Asn Thr Val Ser Pro Gly Tyr Ile Lys
180 185 190
Thr Asp Met Thr Ala Ala Ile Arg Pro Asp Ile Leu Glu Asp Met Ile
195 200 205
Thr Gly Ile Pro Val Gly Arg Leu Gly Gln Pro Glu Glu Ile Ala Ser
210 215 220

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Ile Val Ala Trp Leu Ala Ser Asp Gln Ser Ala Tyr Ala Thr Gly Ala
225 230 235 240

Asp Phe Ser Val Asn Gly Gly Met Asn Met Gln
245 250

<210> 17
<211> 392
<212> PRT
<213> Pseudomonas sp. HJ-2 (beta-ketothiolase (phbA))

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Met Ile Glu Val Val Ile Val Ala Ala Thr Arg Thr Ala Ile Gly Ala
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20 25 30

Val Ile Arg Arg Leu Leu Glu Gln Thr Ala Leu Asp Ser Ser Gln Val
35 40 45

Asp Glu Val Ile Leu Gly His Val Leu Thr Ala Gly Ala Gly Arg Ile
50 55 60

Pro Leu Ala Arg Xaa Xaa Val Ile Ala Gly Leu Pro His Ala Val Pro
65 70 75 80

Ala Met Thr Leu Asn Lys Val Cys Gly Ser Gly Leu Lys Ala Leu His
85 90 95

Leu Gly Ala Gln Ala Ile Arg Cys Gly Asp Ala Glu Val Val Ile Ala
100 105 110

Gly Gly Met Glu Asn Met Ser Leu Ser Ser Tyr Val Leu Pro Lys Ala
115 120 125

Arg Thr Gly Leu Arg Met Gly His Ala Gln Leu Val Asp Ser Met Ile
130 135 140

Val Asp Gly Leu Trp Asp Ala Phe Asn Asp Tyr His Met Gly Ile Thr
145 150 155 160

Ala Glu Asn Leu Val Asp Lys Tyr Gly Ile Ser Arg Glu Ala Gln Asp
165 170 175

Glu Phe Ala Ala Ala Ser Gln Gln Lys Ala Val Ala Ala Ile Glu Thr
180 185 190

Gly Arg Phe Arg Asp Glu Ile Val Pro Val Ser Ile Pro Gln Arg Lys
195 200 205

Gly Glu Ala Leu Ser Phe Asp Thr Asp Glu Gln Pro Arg Ala Gly Thr
210 215 220

Thr Ala Glu Ser Leu Gly Lys Leu Lys Pro Ala Phe Lys Asn Asp Gly
225 230 235 240

Ser Val Thr Ala Gly Asn Ala Ser Ser Leu Asn Asp Gly Ala Ala Ala
245 250 255

Val Leu Leu Met Ser Ala Ala Lys Ala Ala Ala Leu Gly Leu Pro Val

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260 265 270
 Leu Ala Lys Ile Ala Ala Tyr Ala Asn Ala Gly Val Asp Pro Ala Ile
 275 280 285
 Met Gly Ile Gly Pro Val Ser Ala Thr Arg Ser Cys Leu Glu Lys Ala
 290 295 300
 Gly Trp Ser Leu Ala Glu Leu Asp Leu Ile Glu Ala Asn Glu Ala Phe
 305 310 315 320
 Ala Ala Gln Ala Leu Ala Val Gly Gln Glu Leu Gly Trp Asp Ala Gly
 325 330 335
 Arg Val Asn Val Asn Gly Gly Ala Ile Ala Leu Gly His Pro Ile Gly
 340 345 350
 Ala Ser Gly Cys Arg Val Leu Val Ser Leu Leu His Glu Met Leu Arg
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 Arg Asp Ala Lys Lys Gly Leu Ala Thr Leu Cys Ile Gly Gly Gly Gln
 370 375 380
 Gly Val Ala Leu Ala Ile Glu Arg
 385 390

<210> 18
 <211> 566
 <212> PRT
 <213> Pseudomonas sp. HJ-2 (SCL-PHA synthase (phaC))

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 20 25 30
 Asn Thr Trp Phe Ser Gly His Asp Gln Ser Gln Trp Phe Asp Val Pro
 35 40 45
 Val Glu Ala Leu Glu Gln Leu Gln Ala Asp Tyr Gln Gln Gln Trp Ala
 50 55 60
 Glu Leu Gly Gln Gln Leu Leu Ser Cys Gln Pro Phe Ala Phe Ser Asp
 65 70 75 80
 Arg Arg Phe Ala Ser Gly Asn Trp Ser Glu Pro Leu Phe Gly Ser Leu
 85 90 95
 Ala Ala Phe Tyr Leu Leu Asn Ser Gly Phe Leu Leu Lys Leu Leu Glu
 100 105 110
 Leu Leu Pro Ile Asp Glu Gln Lys Pro Arg Gln Arg Leu Arg Tyr Leu
 115 120 125
 Ile Glu Gln Ala Ile Ala Ala Ser Ala Pro Ser Asn Phe Leu Leu Ser
 130 135 140
 Asn Pro Asp Ala Leu Gln Arg Leu Val Glu Thr Gln Gly Ala Ser Leu
 145 150 155 160

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Leu Ser Gly Leu Leu His Leu Ala Ser Asp Leu Gln Ala Gly Lys Leu
 165 170 175
 Arg Gln Cys Asp Leu Gly Asp Phe Glu Val Gly Val Asn Leu Ala Thr
 180 185 190
 Thr Pro Gly Ala Val Val Leu Glu Thr Pro Leu Phe Gln Leu Ile Gln
 195 200 205
 Tyr Ser Pro Leu Ser Glu Thr Gln Tyr Gln Arg Pro Ile Phe Met Val
 210 215 220
 Pro Pro Trp Ile Asn Lys Tyr Tyr Ile Leu Asp Leu Gly Pro Glu Asn
 225 230 235 240
 Ser Leu Ile Arg His Leu Leu Glu Arg Gly His Gln Val Phe Leu Met
 245 250 255
 Ser Trp Arg Asn Phe Thr Gln Glu Gln Ala Asp Ile Thr Trp Glu Gln
 260 265 270
 Ile Ile Gln Asp Gly Val Ile Ser Ala Leu Arg Thr Thr Arg Ala Ile
 275 280 285
 Ser Gly Glu Arg His Leu Asn Cys Leu Gly Phe Cys Ile Gly Gly Thr
 290 295 300
 Met Leu Ser Cys Ala Leu Ala Val Leu Ala Ala Arg Gly Asp Gln Asp
 305 310 315 320
 Ile Ala Ser Leu Ser Leu Phe Ala Thr Phe Leu Asp Tyr Leu Asp Thr
 325 330 335
 Gly Pro Ile Ser Val Phe Val Asp Glu Gln Leu Val Ala Tyr Arg Glu
 340 345 350
 Arg Thr Ile Gly Gly His Gly Gly Lys Cys Gly Leu Phe Arg Gly Glu
 355 360 365
 Asp Met Gly Asn Thr Phe Ser Leu Leu Arg Pro Asn Glu Leu Trp Trp
 370 375 380
 Asn Tyr Asn Val Asp Lys Tyr Leu Lys Gly Gln Lys Pro Leu Ala Leu
 385 390 395 400
 Gly Leu Leu Phe Trp Asn Asn Asp Ser Thr Asn Leu Pro Gly Pro Leu
 405 410 415
 Tyr Cys Trp Tyr Leu Arg His Thr Tyr Leu Gln Asn Asp Leu Lys Ser
 420 425 430
 Gly Glu Leu Asp Leu Cys Gly Val Lys Leu Asp Leu Arg Ala Ile Asp
 435 440 445
 Ala Pro Ala Tyr Ile Leu Gly Thr His Asp Asp His Ile Val Pro Trp
 450 455 460
 Arg Ser Ala Tyr Ala Ser Thr Glu Leu Leu Gly Gly Pro Lys Arg Phe
 465 470 475 480
 Val Leu Gly Ala Ser Gly His Ile Ala Gly Val Ile Asn Pro Pro Asp
 485 490 495

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Arg	Asn	Lys	Arg 500	His	Tyr	Trp	Val	Asn 505	Glu	His	Ile	Ala	Pro	Val	Ala
Asp	Asp	Trp 515	Leu	Gln	Gly	Ala	Gln 520	Gln	His	Ser	Gly	Ser 525	Trp	Trp	Gly
Asp	Trp 530	Phe	Ala	Trp	Leu	Thr 535	Gly	Tyr	Ala	Gly	Pro 540	Arg	Lys	Pro	Ala
Ile 545	Thr	Met	Leu	Gly	Ser 550	Ala	Glu	Tyr	Pro	Pro 555	Leu	Glu	His	Ala	Pro 560
Gly	Arg	Tyr	Val	Lys 565	Leu										